

**A NEW SPECIES OF THYSANOPTERA OF ECONOMIC IMPORTANCE
IN SOUTH AUSTRALIA.**

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The species of thrips described in this paper is of importance in that it is known to be a vector of Spotted Wilt of tomatoes (1) and (4). Specimens collected in South Australia were referred to *Frankliniella insularis* Franklin by Morison in 1930 (3). Davidson and Bald in 1930 (2) and Steele in 1935 (5) have discussed its biology and morphology.

***Frankliniella lycopersici*, sp. n.**

(Text Fig. 1.)

FEMALE.

Length, 1,023-1,606 μ ; width of mesothorax, 257-335 μ .

Colour—Brown to greyish-brown, thorax usually shows red subcuticular colouration; head darker than thorax and abdomen; antennal segments I and II grey-brown; remaining segments a lighter grey-brown; III and IV paler at the base; eyes black; ocelli yellowish-brown; fore-wings faintly tinged with straw or grey, fringes and spines grey-brown, hind wings nearly colourless, alula clear; legs with coxae, femora and mid- and hind-tibiae grey-brown, fore-tibiae paler grey-brown, tarsi pale grey-brown, sometimes yellowish, a dark brown spot near the distal ends.

Head—Length, 121-126 μ ; width, 175-194 μ . Dorsal side: cheeks straight; a strong transverse stria and a few weak striae on the dorsal surface; eyes, 80 μ antero-posteriorly and 58 μ transversely; ocelli spread over a large part of area between the eyes; inter-ocellar bristles 27-41 μ situated between the two posterior ocelli; two small bristles in front of the anterior ocellus near the median line; a small bristle between the anterior ocellus and the eye on each side; six small bristles on each side posterior to the eye and ocellus, of which the fourth from the median line is the longest, 27-36 μ . Ventral side: from anterior part of head to tip of mouth-cone, 247 μ ; two bristles posterior to base of each antenna, median bristle, 39-51 μ ; outer bristle, 24 μ ; one small bristle at inner posterior corner of the eye and three small bristles posterior to each eye. Two pairs of bristles anterior to mouth cone, of which the inner, 36-46 μ , is the longer.

Antennae—Eight segmented; respective lengths of antennal segments, I, 24-27; II, 36-39; III, 49-56; IV, 44-49; V, 36-41; VI, 46-53; VII, 9; VIII, 17-19 μ ; a forked sense-cone is present on the dorsal surface of III, and the ventral surface of IV near the distal ends.

Prothorax—Length, 121-134 μ ; width, 194-243 μ . Dorsal surface: anterolateral angle on each side bears a long bristle, 41-70 μ , and a small bristle, 15-22 μ , directed anteriorly; the anterior margin bears a row of very small bristles and one bristle, 41 μ , between lateral angle and median line; near each post-lateral angle are two bristles, inner 66-85 μ , outer 61-73 μ ; on each side of median line near posterior margin is a bristle, 31-41 μ ; a row of about twelve small bristles on the posterior margin.

Pterothorax—Mesoscutum on each side, with a short bristle near lateral angle and two smaller bristles on the posterior margin; metascutum I on each side bears

two strong bristles directed posteriorly on the anterior margin, inner 56-63 μ , outer 29-41 μ ; legs with fine bristles, hind tibiae with a row of stronger bristles on their distal halves.

Wings—Anterior margin of fore-wing bears 22-24 strong bristles interspersed with finer, longer bristles; anterior vein bears 15-19 short, strong bristles; posterior vein bears 12-15 short, strong bristles; alula bears 6 short, strong bristles.

Abdomen—Abdominal pleurites denticulate on posterior margin; a strong bristle on posterior margin of each epipleurite with the exception of the first; a strong bristle at post-lateral angle of each tergite except tergite I; a bristle about middle of lateral margin of tergites; posterior margin of abdominal tergite VIII bears no comb or, at most, a few small teeth on each side; tergite IX bears (pass-

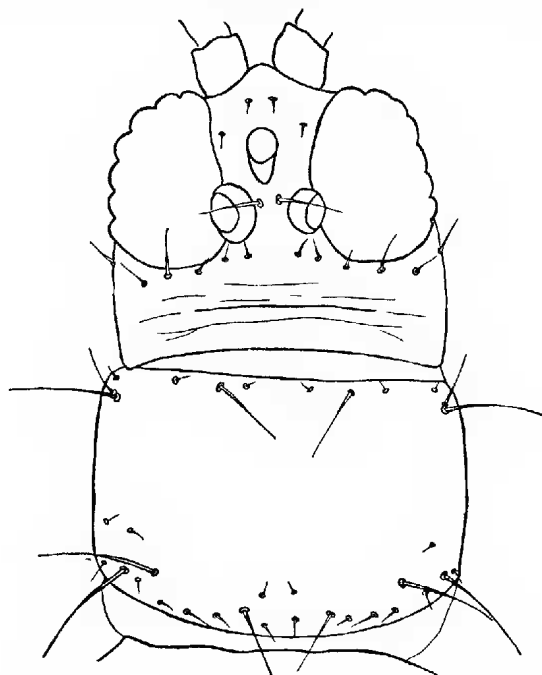


Fig. 1. Head and prothorax of *Frankliniella lycopersici*.

ing antero-posteriorly) on each side, one short, strong bristle + 2 long, strong bristles, inner 97-124 μ , outer 116-138 μ + one short, fine bristle near posterior margin; abdominal tergite X bears (passing antero-posteriorly) on each side two long, strong bristles, outer 112-126 μ , inner 119-136 μ , + three fine, short bristles. Sternites II to VII each bear six bristles on posterior margin.

MAT.F.

Length, 1,026-1,320 μ ; width of mesothorax, 226-289 μ .

Colour—More yellow-brown than the female; sternites III to VII each have a transverse sole-shaped area, lighter in colour than the remainder of the sternite.

Head—Length, 100-112 μ ; width, 153-163 μ ; respective lengths of antennal segments, 22, 33, 14, 38, 34, 45, 7, 14 μ .

Prothorax—Length, 102-109 μ ; width, 172-194 μ .

Wing—Anterior margin of fore-wing bears 19-21 bristles; anterior vein, 16 bristles; posterior vein, 10-12 bristles; alula, 6 bristles.

Abdomen—Dorsal surface of segment IX bears (passing antero-posteriorly) on each side a strong lateral bristle, $74\ \mu$, + a strong bristle near median line, $76\ \mu$, + two short, strong bristles near posterior margin, $25\ \mu$; dorsal surface of segment X bears on each side a strong bristle on the post-lateral angle, $80\ \mu$; ventral surface of segment IX bears three bristles on each side; ventral surface of segment X bears 1 strong bristle + 1 weak bristle on each side.

COMPARISON.

This species resembles *Frankliniella insularis* Franklin but differs in the following characters:—

	<i>F. lycopersici.</i>	<i>F. insularis.</i>
Size - - -	smaller.	larger.
Colour - - -	greyish brown; antennal segments III and IV grey-brown; wings faintly tinged with straw or grey; tarsi grey-brown.	brown; antennal segments III and IV yellow; wings shaded brown except basal fourth; tarsi yellow.
Cheeks - - -	checks straight; ratio obtained by dividing width of head behind eyes by width of head at posterior margin is 0.96 - 1.02.	cheeks curved; ratio, 1.07 - 1.19.
Chaetotaxy -	interocellar bristles between pos- terior ocelli; anterior margin of fore-wing bears 22-24 bristles; anterior vein 15-19; posterior vein 12-15 bristles; comb on posterior margin of abdominal tergite VIII either absent or only partly developed.	interocellar bristles in front of anterior margin of posterior ocelli; anterior margin of fore-wing bears 22-28 bristles; anterior vein 20-23; posterior vein 15-18 bristles; comb usually well developed but sometimes absent.

LOCALITY AND HOSTS.

Description is from 4 ♀♀ and 2 ♂♂ collected from roses in Melbourne, Victoria; 5 ♀♀ and 3 ♂♂ from roses and carnations, Adelaide South Australia; 3 ♀♀ and 3 ♂♂ from tomatoes, Adelaide, South Australia. These were compared with *Frankliniella insularis* collected from cut flowers from Puerto Rico, intercepted by Bur. Ent. Plant Quarantine, N.Y.; also from flowers *Erythrina* sp., Mayaguez, P.R.; *Erythrina* sp., Trinidad; from unknown host, Cuba; and from flowers of gerbera, Bermuda.

Holotype ♀ and allotype ♂ in South Australian Museum.

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